

Notice of Allowability

Application No.

10/669,050

Examiner

Eric Woods

Applicant(s)

KATO ET AL.

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Response filed 5 December 2005.
2. ☒ The allowed claim(s) is/are 1 and 5-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Response to Arguments

The previous rejections of claims 1, 5-6, 11-12, 17, and 20 under 35 USC 103(a) are withdrawn in view of applicant's submission of translations of the foreign priority documents. Applicant's representative David Tarnoff stated on 6 March 2006 at 7:45 a.m. in a phone call with examiner that a formal statement under 37 CFR 1.55(a)(4)(ii) would be filed in the instant application, since the relevant paragraphs from the Remarks (page 2 of Remarks dated 12/05/2005) could be construed as not being the statement required with the submission of such documentation as per the 'accurate' standard set forth in 37 CFR 1.55(a)(4)(ii). The documents were (apparently) not prepared by a certified translator, so the presence of that statement is necessary. That section of the Remarks will be accepted as a temporary substitute or surrogate for such a formal statement until it is made of record.

As such, the documents are sufficient to overcome the grounds of rejection as above.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

Claims 9-10, 13-16, and 18-19 were allowed in previous Office Actions for the reasons stated therein.

Claims 7-8 were indicated allowable in the last Office Action as well.

Claims 5-8 depends on claim 1, claim 12 depends upon claim 11, and claim 20 is a method claim implementing apparatus claim 1.

Claim 1 is allowed because it teaches a relative displacement computing section with the viewer motion computing section. The prior art teaches a great many methods for adjusting images to compensate for motion of the **platform** – both absolute and relative – but does not contain the idea of compensating both for motion of the platform for a road vehicle **and** the motion of the viewer as separate. The prior art tends to treat the viewer's motion as synonymous with that of the platform, whereas they can in fact be substantially different – particularly the position of the user's head versus the actual position of the vehicle. Therefore, a physiological model or model of body motion needs to be taken into account to compensate for disparities and mass and inertia created by the shifting of the user's head in order to maintain a constant image.

This concept is non-obvious in light of the prior art available using the earlier date as above, and is therefore allowed.

Claim 11 is allowed because the system uses both the translational displacement and the center deviation to compensate for the motion of the image, since the prior art does not do both **simultaneously** and does not stop computing the center deviation during acceleration / deceleration (though as argued in previous Office Actions, Abali at least suggests that particular aspect, although it is not explicit, and indeed an anti-bias circuit does not compensate for certain classes of acceleration-induced motion (e.g. short-term acceleration)).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US PGPub 2002/0101510 to Basson et al, which teaches a similar system to applicant, but uses a head-mounted display and so is excluded from consideration. A method of controlling relative displacement based on **device** motion is taught by Kamijo et al (US 2002/0027547 A1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Woods whose telephone number is 571-272-7775. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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March 6, 2006


ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER